

# Fact Sheet

National Institute of Biomedical Imaging and Bioengineering

## DIVISION OF APPLIED SCIENCE & TECHNOLOGY



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## Introduction

The National Institute of Biomedical Imaging and Bioengineering, the newest component of the National Institutes of Health, leads the development and accelerates the application of biomedical technologies. The Institute is committed to integrating the physical and engineering sciences with the life sciences to advance basic research and medical care.

As part of the Extramural Sciences Programs Office of the NIBIB, the role of the Division of Applied Science and Technology is to support the translation of enabling technologies, methods, and devices for research and clinical applications. The Division accomplishes this goal by supporting extramural research and through collaborations, workshops, and conferences with other Institutes and Centers at NIH, other Federal agencies, and other organizations.

## Current Research

The division's current research portfolio includes scientific areas such as imaging technology development and imaging devices for planar and tomographic x-ray imaging, radionuclide imaging, MRI, ultrasound, optical imaging, spectroscopy, and microscopy; imaging agent and molecular probe development; image display and processing; image-guided interventions; telemedicine; therapeutic agent delivery systems and devices; surgical tools and techniques; human-computer interface; biosensors, biomaterials, drug and gene delivery; and biomedical informatics.

## Funding Opportunities

The NIBIB supports a coordinated program of research and research training that can be applied across a broad spectrum of biological processes, disorders, and diseases. Potential applicants for NIBIB grants are strongly encouraged to discuss their proposed projects with the scientific staff of the Institute prior to preparing an application. Individuals can obtain guidance on the suitability of the project and the most appropriate funding mechanism or opportunity for the proposed research.

The Institute supports research through a variety of NIH grant mechanisms such as:

- **R01** - Research project grant to support investigator-initiated research projects.
- **R03** - Research grant to support projects requiring small amounts of funding for limited periods of time.
- **R13** - Conference grant to support high-quality scientific meetings, conferences, and workshops.
- **R21** - Exploratory and development grant to support projects that explore novel concepts.
- **R43/R44 and R41/R42** - Small Business Innovation Research and Small Business Technology Transfer awards that support exploration of ideas that may ultimately lead to commercial products or services.

Specific areas of scientific interest are publicized through program announcements (PA) and requests for applications (RFA). Additional information on current opportunities available at the NIBIB can be found by searching the Funding Opportunities Database on the NIBIB website at: <http://www.nibib.nih.gov/publicPage.cfm?Section=funding&Action=Search>.

### Collaborations

An important aspect of the Institute's mission is encouraging collaborations between the Institutes and Centers at NIH, other Federal agencies, and the private sector.

- **Interagency Image-Guided Interventions Group (IGI Group)** – The IGI Group is an interagency working group organized and chaired by the NIBIB. Its purpose is to facilitate interdisciplinary research, new technology development, and standards for image-guided interventions. Members include representatives from NSF, NIST, NASA, FDA, other Federal agencies and multiple NIH Institutes and Centers.
- **Inter-Institute Imaging Group (I3G)** – The I3G is a trans-agency group administered by the NIBIB. This group meets monthly using an open agenda format, to enable discussion of scientific issues in bioimaging. Membership of this group includes representatives from the NIH Institutes and Centers, as well as other Federal agencies.
- **Biophysics Interest Group** – This group promotes the study of fundamental physical principles that are essential to understanding life processes and the use of quantitative methodologies in advancing biomedical research and healthcare. The members of this group include representatives from NSF, NIST, HHMI, academia, and private industry.
- **Bioinstrumentation Interest Group (BIIG)** – The BIIG focuses on the science and technology of bioinstrumentation from the viewpoint of those who are more than routine users. The emphasis is mutual education for those interested in modifying, designing, and building instruments for biomedical research. Representatives from the NIH Institutes and Centers attend the group's meetings.

### NIH Roadmap Opportunities

The NIH Roadmap is a series of far-reaching initiatives designed to build on the progress in medical research achieved

through the recent doubling of the NIH budget. The Roadmap focuses on three main areas: new pathways to discovery, research teams of the future, and re-engineering the clinical research enterprise.

Additional information on NIH Roadmap initiatives can be found on the NIH website at: <http://nihroadmap.nih.gov>.

### Looking to the Future

New and exciting programs are under development at the NIBIB. Up-to-date information on funding opportunities, workshops, and conferences can be found on the NIBIB website.

### NIBIB Contacts

You may contact NIBIB program staff with your questions about funding opportunities or the application process. We welcome the opportunity to speak with potential applicants about the Institute's programs. Areas of scientific coverage for each member of the program staff can be found on the NIBIB website at: <http://www.nibib.nih.gov/publicPage.cfm?pageID=2429>.

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